ABSTRACT

INTRODUCTION

Diabetes Mellitus is a chronic disorder that is associated with cardiovascular complications, renal complication and various types of microangiopathiesincluding metabolic syndrome. It is the most common on-communicable disease affecting society in both developing and developed countries .elevated serum uric acid levels is a risk factorrespossible for development of complications. SUA play an important role in cardiovascular diseases and also affecting other system which includes renal, peripheral vascular,opthalmological,neurological and metabolic component.

Serum uric acid is a prognostic indicator for development of complications in patients with diabetes mellitus type 2.Elevated levels of serum uric acid causes increased prevalence of systemic hypertension,altered lipid metabolism and obesity . In non diabetic individuals the prevalence of increased levels of serum uric acid occurs in between 13-19%.

The aim of this study is to find out the prevalence of hyperuricemia in DM subjects and its relation with complications also to evaluate possible association of hyperuricemia with microvascular and macrovascular complications.

Previously serum uric acid is considered as antioxidant at lower values but during studies it was found that at higher concentration level of SUA acts as pro oxidant which leads to formation of toxic substances such as reactive oxygen species which leads to further damage to the vascular system and progress to multiple complications.

METHODOLOGY

The study was carried out in Coimbatore medical college and hospital.The patients diagnosed as type 2 diabetes mellitus are included in this study.In these patients serum uric acid level was measured.These patients are devided into two groups in which 50 patients having normal serum uric acid and another 50 patients with elevated serum uric acid.All the diabetic patients included in this study are examined clinicaly and microvascular and macrovascular complications were documented with the help of various examinations which includes serum urea,creatinine,sodium,potassium.random blood sugar level,fundusexamination,neurologicalexamination,ECG and radiological examination which includes USG KUB,echocardiography.Results were analysed and compared by statistical methods.

RESULTS

As observed by the study there is a significant relationship between serum uric acid and development of complications in parients with type 2 diabetemellitus.

Prevalance of ischemic stroke is more than that of hemorrhagicstroke in patients with type 2 diabetes mellitus with raised serum uric acid.

Prevalance of chronic kidney disease is more in patients with type 2 diabetes mellitus having elevated levels of serum uric acid as compare to patients with normal serum uric acid level

Prevalanceof diabetic retinopathy is more in patients with type 2 diabetes mellitus and there is association with raised serum uric acid in type 2 diabetes mellitus.

There is strong association between raised serum uric acid level and cardiovascular diseases in patients with type 2 diabetes mellitus.

Diabetic ketoacidosis has negative correlation with serum uric acid level in patients with type 2 diabetes mellitus